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A Critical Review of the Literature of Social Media's Affordances in the Classroom

Abstract: Even though the use of social media in education is a now widely-studied topic, there still does not seem to be a general consensus for what social media may afford students or how best to use them in the classroom. In this article, I aim critically discuss some of the most prominent qualitative studies that explore the use of social media in the classroom. I critically consider some of the claims for affordances that social media can offer in the classroom, in particular the affordances of the interactive features that are unique to social media, the affordances for authoring to a wider, interactive audience, and the opportunity for increased student creativity. I then discuss how contemporary scholars have used social media as a platform for learning and literacies. The article some scholars' findings for incorporating social media into the classroom and the limitations for social media in education. The article concludes with a discussion of some potential steps for future research.

Key Words: Social Media, Education, Learning, Literacies, Literacy Practices, Social

Networking Sites, Mobile Apps, Qualitative

A Critical Review of the Literature of Social Media's Affordances in the Classroom

In 2015, The Pew Research Center reported that 84% of all U.S. adults use the internet (Perrin, 2015) and 65% use social media (Perrin & Duggan, 2015). In a survey of U.S. teenagers, they found that 92% of teens go online daily, and 71% use at least two social networking sites (Lenhart, 2015). Facebook is the most widely-used social media site, with 71% of teens using it, and Instagram is second with 52% of teens using it (Lenhart, 2015). Because the internet and social media play such a large role in both adults' and teens' lives in the U.S. and around the world, many scholars claim that they need to be better incorporated into the classroom to teach students how to use social media in ways that go beyond just personal use (e.g., Blaschke, 2014; Canning 2010; Leu et al., 2013; McNely, 2012).

As technologies continue to advance and become a more prominent feature in people's lives (Lenhart, 2015; Perrin, 2015; Perrin & Duggan, 2015), the ways that people interact, communicate, and learn continue to change as well, and many may thrive in learning situations where creativity, social interactions and collaboration through technology are fronted (Edwards-Groves, 2011; Nichols, 2007). Some scholars argue that with the rapidity with which technology has changed society over the last two decades since the advent of Web 2.0, so too must school curricula to better prepare students for the future (Kalantzis & Cope, 2001; Mills, 2009; Moje, 2009; New London Group, 2000). While this argument has been made for the past twenty years, scholars continue to call for the adjustment of curricula to better meet the needs of our digital technology-based world.

Even though classroom social media incorporation is often seen as a step towards embracing various methods of communication, the effectiveness for creating a learning environment or enhancing classroom learning is still widely debated (Ellison, Steinfield, &

Lampe, 2011; Manca & Ranieri, 2013). Some scholars are skeptical of the use of social media in the classroom unless incorporated with a strong purpose or ideology (e.g., Brabazon, 2011; Collin & Street, 2013; Street, 2013). Though scholars have argued that social media has the potential for learning through supporting networks of information and people (e.g., Anderson & Dron, 2011), others still argue that social media are merely a place for socialization (e.g., English & Duncan-Howell, 2008; Madge, Meek, Wellens, & Hooley, 2009). Thus, there is still no strong consensus on social media, its affordances, or how it should be taken up in the classroom (see Manca & Ranieri, 2013; Stornaiuolo, Higgs, & Hull, 2013).

In this article, I critically discuss some of the most prominent qualitative (or qualitative-heavy) studies that explore the use of social media in the classroom. I begin by describing social media and its historical background. Then I critically consider some of the claims for affordances that social media can offer in the classroom before moving into some scholars' suggestions for incorporating social media into the classroom and the limitations for social media in education. Finally, I conclude with a discussion of some potential steps for future research.

Social Media

Because new websites and mobile applications (apps) for social media are released everyday, social media can be difficult to categorize (Kaplan & Haenlein, 2010). Therefore, the current definitions of social media are quite broad and can encompass many mediums (e.g., websites, video games, mobile applications, blogs). Overall, the term *social media* refers to “any technology that facilitates the dissemination and sharing of information over the Internet” (Robbins & Singer, 2014, p. 387). More specifically, Kaplan and Haenlein (2010) define social media as a “group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content”

(p. 61). Web 2.0 indicates to the adjustment in the internet that allowed users to generate content, which will be discussed further below.

Some social media platforms are exclusively hosted on websites or apps, and some are used on both. Social media can be used for communicating through photos, videos, and/or text and sharing sourced information with predominantly friends and family (e.g., Facebook, Instagram, Snapchat) or with more professional contacts (e.g., LinkedIn, Academia.edu, ResearchGate). Social media can also be used for specialized tasks like blogging (text or photo) and writing (e.g., Blogger, Tumblr, WordPress), sharing photos, videos, drawings, and/or text, (e.g., Vine, Snapchat, Instagram, Twitter), sharing sourced information and discussing it (e.g., Pinterest, Reddit, Twitter), gaming (e.g., Farmville, World of Warcraft), saving and categorizing information to view later (Pocket, Google+, Pinterest), etc. However, there is considerable overlap in the use of many of these social media platforms.

Background

Social media is a relatively new term that has evolved as a way to describe various platforms for online communication. There are also larger, more established umbrellas under which the term social media may fall. One of the longest-standing and most studied of these umbrellas is Information and Communications Technology (ICT). ICTs include mediums like social media as well as those that do not have an interactive audience, such as interactive whiteboards and offline computer games where the audience is limited to those physically in front of/using the medium at that time.

Another large umbrella under which social media falls is Web 2.0. A term first developed in 2004 (Kaplan & Haenlein, 2010), Web 2.0 describes the ways in which both software developers and users design and use the internet to consume, share, and remix data from multiple

sources, including those of their peers (Lankshear & Knobel, 2007; O'Reilly, 2007). Sometimes called the participatory web (Crook, 2012), Web 2.0 emphasizes collaboration through an innovative means of production where expertise and knowledge are distributed, shared, and built upon (Kaplan & Haenlein, 2010; Lankshear & Knobel, 2007). Popular examples of Web 2.0 include blogs, forums, and wikis (like Wikipedia).

Before mobile applications (apps) were widely used, social media were hosted on Web 2.0 websites, referred to as social network(ing) sites (or SNS) (e.g., boyd & Ellison, 2007; Forkosh-Baruch & HersHKovitz, 2012). boyd and Ellison (2007) use a three-pronged definition to conceptualize what they refer to as social network sites, which they define as:

...web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. (p. 211).

However, because of mobile technologies and apps for mobile devices (phones, computers, and tablets), many users no longer have to visit an actual website for social networking, and instead use an app. Some social media apps, like Instagram and Snapchat are only hosted on apps, though content can be viewed on websites, while other social networking sites, like Facebook and Twitter, can be accessed through either an app or a website. Therefore, I use the term *social media* to refer to both social networking websites as well as mobile apps.

Social Media in the Classroom

Scholars have approached social media's use in the classroom in varying ways (e.g., through the theoretical frameworks used, methods used, disciplines examined, etc.). Areas in which social media in the classroom has been studied span from radiology and business writing

in higher education (e.g., DuBose, 2011; Magrino & Sorrell, 2014) to elementary and middle school literacy (e.g., Lankshear & Bigum, 1999; Ranker, 2008) to high school English (e.g., O'Byrne & Murrell, 2014) with many others in between. Furthermore, even though social media's use in the classroom has predominantly been studied using ethnographic methods (Stornaiuolo, Higgs, & Hull, 2013), some scholars have also used other methods such as action research (e.g., Cochrane, 2014; Edwards-Groves, 2011), activity theory (e.g., Rambe, 2012a; Sam, 2012) or discourse analysis (e.g., Greenhow & Gleason, 2012).

In their literature review of 43 articles examining literacy practices and social media, Stornaiuolo, Higgs, and Hull (2013) found that the majority of scholars studying social media in schools looked at identity development and expression, security issues, relationships, and friending behaviors. Additionally, many studies of educational practices with social media focus on online classrooms (e.g., Blaschke, 2014; Conole & Dyke, 2004; Dabbagh & Kitsantas, 2012) or higher education classrooms (e.g., Moran, Seaman, & Tinti-Kane, 2011; Okoro, Hausman, & Washington, 2012). Other scholars' conducting empirical studies focused on social media use in education examined the products created (e.g., Hull & Nelson, 2005; Lee, 2007) and the expressed identities that can be seen in these products (e.g., Halverson, 2009; Hughes & Morrison, 2014; Zammit, 2011), while still others focused on teacher/professor attitudes about social media in the classroom (e.g., Mao, 2014; Vie, 2015) or assessment (e.g., O'Byrne, 2009; Unsworth & Chan, 2009).

Social media use in the classroom has evolved from early Web 2.0 tools like blogs and wikis into tools like Facebook, Twitter, and other apps that allow for collaborative, interactive remixing and design. Even in early studies, scholars noted benefits and constraints for using interactive, collaborative online tools. For example, Conole and Dyke (2004) describe some of

the early studied affordances of ICTs (interactive and non-interactive) in the classroom, including the accessibility and speed of change of information, diversity of information sources, affordances for communication and collaboration as well as reflection and critique, non-linear and multimodal learning pathways, and the immediacy with which learners can get information. Published in 2004, this study foreshadowed some of the affordances that scholars still argue social media can provide today.

Many of the earliest studies of social media in the classroom focused on interactive writing websites, or more specifically, blogs (short for web logs). Blogs are two-way interaction tools that allow for people to collaborate, communicate, cooperate, and participate with one another (O'Byrne & Murrell, 2014; Shirky, 2008). Some of the common features of blogs are that they are generally individually maintained, have hyperlinked and archived posts, and display most recent posts first (Hew & Cheung, 2013; Sim & Hew, 2010). Blogs can be used for reflective thinking both in the moment and to see and compare changes in thinking across time (Ellison & Wu, 2008; Hew & Cheung, 2013).

Persistently, blogs continue to be the most commonly studied form of social media in the classroom, perhaps because they closely mirror traditional classroom literacy practices, and as bounded texts, they may be easier to study than some of the literacy practices on more open platforms (Stornaiuolo, Higgs, & Hull, 2013). For example, Lui, Choy, Cheung, and Li (2006) used reflective blogs in a college computing class and found that even with mandatory use of blogs, students still had a positive attitude about their use. In a more recent study on blogs, O'Byrne and Murrell (2014) studied the multimodal and interactive affordances that blogs provide in classrooms to reshape the literacy practices of high school English students. They were most interested in what constitutes a blog, the online forms of communication and

collaboration that happen within a blog, and the multimodal affordances of blogs (p.927).

Additionally, Magrino and Sorrell (2014) studied the use of blogs in combination with other social media platforms (Facebook, Twitter) in a business and technical writing college classroom. They found that students benefited greatly from the collaborative and engaging tools that allowed for greater student interaction, student-to-teacher communication, and distribution of course material.

As new apps and social networking sites continue to gain popularity, more scholars are examining the potential benefits for using other technologies in the classroom beyond the traditional blog (Moje, 2009; Stornaiuolo, Higgs, & Hull, 2013). Scholars are now interested in the educational benefits of new, highly interactive technologies like Facebook (e.g., Rambe, 2012b, 2013; Roblyer, McDaniel, Webb, Herman, & Witty, 2010; Wodzicki, Schwämmlein, & Moskaliuk, 2012) and Twitter (e.g., Buck, 2012; Forkosh-Baruch & HersHKovitz, 2012; Greenhow & Gleason, 2012). These newer platforms can potentially provide different areas for student collaboration, expression, and interaction, which I now discuss in more detail.

Affordances of Social Media in the Education

In this section, I first discuss the features of social media and their potential benefits and then critically examine some of the most prominent claims of affordances for which scholars assert that social media allow. While the asserted benefits of social media use are numerous, here, I focus on some of the more common contentions: offering opportunities for widened audiences, allowing for student creativity, and finally the implications for learning and literacy practices.

Features

A prominent feature of social media is the hashtag (represented as #). Originally

popularized on Twitter, hashtags are a way to categorize posts (Greenhow & Gleason, 2012). Users can search for posts by using hashtags and see all of the posts that share that particular hashtag. In education, when students use hashtags to categorize and search for course-related posts, communication between students is traceable within those posts both in the classroom and online. This allows students to interact with each other and their posts in real-time, thus putting the students in the positions of co-authors as they engage with each others' posts, adding comments and hashtags of their own (Arizpe & Styles, 2008; Moje, 2009). Because students can use numerous hashtags on a single post (e.g., up to 30 on Instagram), they can code their posts for a variety of purposes (see Daer, Hoffman, & Goodman, 2014), which can signal participatory literacy practices (Santo, 2011; Stornaiuolo, Higgs, & Hull, 2013). The user-generated categorizations can give some insight into how students view their posts in relation to themselves (e.g., #adorable, #Idontgetit, #Iactuallymadethis) and to other posts (e.g., #WebsiteCreation or #schoolproject; Stornaiuolo, Higgs, & Hull, 2013).

Through features like "likes" (e.g., thumbs up or hearts to show support for a post), users can give quick feedback to other users and see the reactions that their posts are getting. Because these are usually publically numbered/counted, both the poster and the viewers can see how popular a post is at a glance. These kinds of participatory tools (along with comments) allow students to see how much attention a post is receiving, something Magrino and Sorrell (2014) found particularly motivating for students in their study because the teacher is no longer the only person looking at and judging the quality of student work. Furthermore, commenting allows for the post to become a multi-way communication between the students and other users (O'Byrne & Murrell, 2014; Siemens & Weller, 2011; Shirky, 2008). Because of these kinds of affordances of social media to engage students in interactive communication, students can then question their

peers, adapt to and make conjectures about ambiguity in their posts, make connections about their ideas and work, which according to Arizpe and Styles (2008), leads to “critical thinking and meaningful learning,” (p.370) and self-driven learners (Jimoyiannis & Angelaina, 2012).

However, Lewis, Pea, and Rosen (2010) assert that even though social media are dynamic and interactive, they are actually quite constraining and one-dimensional; they are “based in collective circulation of artifacts and individual meaning-making, rather than the co-construction of meaning,” (p.356). Using the examples of YouTube and Facebook, Lewis and colleagues note that the formatting features require users to post linearly and interact with tools that are not collaborative (liking, rating, sharing), which may affect how students and users view what constitutes participation and even collaboration.

Other scholars argue that features like posting and commenting also allow for student learning to become more visible through media as students can show their thought processes and realizations of new ideas through them (e.g., Jimoyiannis & Angelaina, 2012; O’Byrne & Murrell, 2014; Rambe, 2012a, 2012b). The transparent and easily traceable features can also reveal if students understand the conventions of the space. For example, in her study, Buck (2012) closely examined a college student’s (Ronnie) expert use of social media and the various literacies that he was able to represent in that use. She found that Ronnie enacted literacy practices through his demonstrations of his knowledge about each platform, understanding the discourses, audiences, and semiotics of each platform and the differences between them for each one. Because of his nuanced understanding, he was able to use the features of social media to his benefit to convey the information that he felt was most appropriate for each distinct platform.

Increased, Interactive Audience

Perhaps one of the most commonly touted benefits of using social media in the classroom

is the larger audience for which it may allow (Curwood, 2013; Edwards-Groves, 2011; Hughes & Morrison, 2014; Robbins, & Singer, 2014; Magrino & Sorrell, 2014; Stornaiuolo, Higgs, & Hull, 2013). Social media, with their multimodal and participatory affordances (Hull, Stornaiuolo, & Sterponi, 2013; Stornaiuolo, Higgs, & Hull, 2013), encourage people to interact beyond their immediate and usual audiences (boyd, 2011; Stornaiuolo, Higgs, & Hull, 2013). Thus, scholars claim that projects using social media can give students an opportunity to reach the greater public of the internet, which can be less restrictive than traditional paper-based writing assignments (Magrino & Sorrell, 2014). This means that students' writing has the ability to reach a wider, more realistic audience than just their teachers (and, in some cases, fellow students). The audience may include other students, but many hope that it goes beyond the classroom to reach distant audiences who may also share interests and can "jointly construct contexts through their interactive textual practices (Haas & Takayoshi, 2011)" (cited in Stornaiuolo, Higgs, & Hull, 2013, p.222).

For example, Edwards-Groves (2011) analyzed how 17 teachers and their students used digital technologies in their classrooms to construct texts. She found that those who used technology satisfactorily allowed for greater learning through collaboration and wider, and what she asserts are more authentic audiences for students. Though her focus was more on the teachers and their use of technology in the classroom, Edwards-Groves also included students' reflections about their digital projects; these student reflections discussed the benefits of a realistic audience greatly. Furthermore, in his focus group of 53 high school students, Crook (2012) found that the participants were concerned with the lack of audience in schools and that social media provided an increased audience for them. Even though traditional presentations are confined to the walls of a classroom, social media-based projects are both for a larger audience and can connect to

other online resources (Edwards-Groves, 2011; Magrino & Sorrell, 2014).

Additionally, in their work with three 6th grade classrooms, specifically focusing on English Language Learners, Hughes and Morrison (2014) found that their focal students responded well to having an audience of more than just the teacher and that they began to communicate and participate more both online and in the classroom because of this increased audience. However, Hughes and Morrison focused on two of the 78 students in the course (10 of which were ELL), and these students were chosen because of the great strides that they made in the course. Other students may not have experienced the same engagement or even cared about their audience. Similarly, Curwood (2013) focused on one exemplary student (Jack) who used English class as an opportunity to write fan fiction for *The Hunger Games*, posting his writings on Mockingjay.net for an authentic audience to read and interact with and playing the game *Panem October*, designing interactive games for others to play as well. Though these two examples highlight the benefits that having an authentic audience can have for some students, they only focus on the those students who excelled with social media in the classroom.

However, concerns over privacy, especially with younger students, often lead teachers and administrators to choose more restrictive tools or environments (e.g., private groups on Facebook) that restrict any potential for interaction beyond the boundaries of the classroom (Manca & Ranieri, 2013). This restriction then automatically blocks any potential interaction with a widened audience, thus negating this potential affordance.

If permitted however, an increased, authentic audience is also (potentially) interactive because of the inherent features of social media previously discussed. By using features like hashtags to categorize and search for posts, comments to react to and question posts, and liking to show support for posts, communication between users is encouraged through social media

(Robbins & Singer, 2014). This then puts the users in the positions of co-authors as they engage with each others' posts, adding comments, hashtags, and likes to share their reactions and feedback to the post (Arizpe & Styles, 2008; Moje, 2009). Interaction around the posts can then engender a conversation between users as well as shape the original author's view of the post and his/her potential future posts.

Because of the ability to post comments and have multi-way communication, students can be opened up to more modes and channels of communication wherein multiple students can communicate more effectively with each other in real-time (O'Byrne & Murrell, 2014; Shirky, 2008; Wandel, 2007). According to McLoughlin and Lee (2007, 2008, 2010), this interaction encourages information sharing, student-generated content and discussions around this content, and improved social rapport. With a widened audience, students are making the choices about when to reply and what with, how they want to use hashtags to categorize their multimodal texts, and in this, they have created new communication environments (Robbins & Springer, 2014) of which they are largely in charge.

In order for the increased audience and interactive format to be of any useful classroom benefit, however, students need to actually embrace the tools and be interested in using them (New London Group, 1996). Students may see in-class education in a more traditional light where information is passed from the instructor to the student and where the instructor's knowledge and opinions on the course concepts is the valued (and tested) information (Collin & Street, 2013; Goodband, Solomon, Samuels, Lawson, & Bhakta, 2012; Manca & Ranieri, 2013). Therefore, they may not place any value on interacting with or learning from other students via social media (Collin & Street, 2013). In such cases, technologies for student-to-student communication establish very little, even though they are using a platform that allows for

widened audience or visible communication.

Student Creativity

Though not as abundantly seen as claims about audience, scholars also argue that social media use in the classroom can offer students the opportunity to be more creative (e.g., Edwards-Groves, 2011; Greenhow et al., 2015; Greenhow & Robelia, 2009). Social media tools can allow for remixed multimodal texts (comprised of many modes such as pictures, text, video, audio, etc.) that provide an opportunity for students to express themselves (Knobel & Lankshear, 2008; O'Byrne & Murrell, 2014), where they can draw on the meanings of multiple modes to do so (Kress, 2003). While the idea of making meaning from the composition of multiple modes is not new, the growing simplicity and ubiquity of multimodal design tools such as social media is relatively more transformative (O'Byrne & Murrell, 2014, p. 929). Creativity is encouraged as students work across modes to construct meanings in new ways (Kress, 2003). Students can use design, production, and authoring to construct these meanings, designing texts that show their understanding and abilities with multimodal (audio, visual, special, textual modes) texts (Cope and Kalantzis 2000; Edwards-Groves, 2011) while using social media.

In their study, Greenhow and Robelia (2009) claimed that high school students using social media felt validated in their creative work and felt support from their peers and others in their classroom-related tasks. Edwards-Groves (2011) asserted that the creativity and design within social spaces like social media allowed students into a new "pedagogic territory" (p.51). However, Lewis et al. (2010) claim that even though most ostensibly think of social media as a creative space, it is less creative than one might think because of the curated nature of what is being chosen to share. They note that rather than expressing oneself authentically, "users produce and consume media more as if in a hall of mirrors than in a jointly created carnival of

collective expression of selves,” (p.357). Bezemer and Kress (2014) raise a similar concern, noting that students are often simply just copying and pasting information rather than writing creative, original material.

Moreover, even though students may have opportunities to express creativity, they also are working within more layers that they need to further understand (Archer, 2006; Serafini, 2012; Thesen, 2001). Thesen (2001) argues that multimodal texts (in humanities classrooms especially) require students to navigate four layers of language at one time, which can be particularly complex. These layers are “the English language system, academic discourse, mode-specific language associated with the analysis of the visual, and a metalanguage of critical analysis” (Archer, 2006 p. 452). Navigating these layers may limit the creativity of students.

Learning & Literacies

Because having the abilities to “successfully access, communicate, work, and create” in today’s computer-based culture differs from traditional reading and writing literacy practices (Kellner, 2000, p.256), scholars argue that students and teachers need to redefine (and continue to redefine) what it means to be “literate” (Leu et al., 2013). Many argue that literacy is not a skill, but rather a practice that needs to be worked and honed over-time (Barton, Hamilton, & Ivanič, 2000; New London Group, 2000; Street, 1995, 2003), as literacies continue to be reshaped by the social and cultural forces around them (Archer, 2006; Kellner, 2000; Leu et al., 2013). Based on this view of literacies, teachers and students need to continually refine their ideas of literacies and use classroom tools that can adapt and change to support evolving concepts of them. Some contend that using social media can be an effective, flexible tool to incorporate student-centered communication into the classroom and to support students’ multimodal learning and literacy practices (e.g., Ajayi, 2008; Hughes & Morrison, 2014; Mao,

2014; O'Byrne & Murrell, 2014; van Lier, 2004).

Undoubtedly complex concepts, learning and literacies are often at the heart of educational studies focusing on social media in the classroom. As a result, many studies assert the potentials for learning or the practices surrounding learning. For example, in their critical review of 23 empirical studies examining Facebook as an educational tool, Manca and Ranieri (2013) found that most of the studies focused on how students felt about using social media as a learning tool rather than the actual learning that resulted.

In their review, Stornaiuolo, Higgs, and Hull (2013) found that social media can be a powerful tool that unites a diverse range of knowledge, perspectives, and practices. This range of perspectives can help learners develop meaning (Beauchamp & Kennewell, 2010) as they support and interact with new ideas, skills, and information resources. Therefore, social media may have strong implications for both formal and informal learning (Stornaiuolo, Higgs, & Hull, 2013). For example, Jimoyiannis and Angelaina (2012) evaluated students' engagement in a multimodal project (blog-based) where 21 fourteen- and fifteen-year-old science students used a variety of modes (photos, text, videos) singularly and in combination to complete a project about acid rain. Jimoyiannis and Angelaina determined that activities like blogging that required students to use multimodal tools allowed for greater idea integration and meaning construction.

Using social media as multimodal tool to bring multiple modes together for meaning making may allow students to express ideas differently and reflect upon them. For example, Blaschke's (2014) study "examining learner familiarity and research confidence with social media over time" (p. 2) through graduate students' reflections sheds some light on the perceptions of the learning while using social media. One student in the study reported that he felt compelled to think deeper about the course materials because he was processing them and

then expressing his ideas in both textual and visual modes. Other students in Blaschke's study reported that social-media use pushed them to reflect on their learning preferences. It is not clear, however, if these self-evaluations were positive or negative towards learning through social media.

In their study of students using Facebook, English and Duncan-Howell (2008) reported that even though students avidly used social media, the majority of the communication centered around surface level encouragement rather than course-related or academic topics. Therefore, more careful attention may need to be paid to students using and interacting around social media for academic purposes to better encourage learning and support academic literacies.

Additionally, Buck (2012) noted that examining how the literacy practices exhibited on social media are "connected to academic literacy practices and how these different influences on literacy work together" (p.35) may give researchers more insight into the literacy practices that students bring with them into the classroom. Then, teachers and researchers may determine how to better leverage these practices to make the classroom a more authentic and engaging place for students.

Because of the interactive features of social media already discussed, scholars assert that these spaces allow for student learning to become more *visible* through media features like posting and commenting (Jimoyiannis & Angelaina, 2012; O'Byrne & Murrell, 2014; Rambe, 2012a, 2012b). Students can show their thought and creation processes as well as realizations of new ideas through such features. They can also see other students' posts and progress and feedback from people on their posts, and they can use this information to their benefit. For example, in Rambe's (2012b) study, he claimed that students' online interactions through Facebook with the instructor and other students gave further insights into the mindsets, literacy

practices, and even literacy shortcomings that students might have. This notion, however, was not fully explicated in the article, and therefore, it is difficult to tell how these were observed by the instructor and researcher.

Further, in Blaschke's (2014) study, she noted that while most students' responses were generally positive, some felt that the particular media used affected their learning process or that they struggled to separate the media that supported the learning from the learning itself. This means that not all social media are created equal, and more research may need to be done to see which platforms can support learning most effectively. For example, Manca and Ranieri (2013) found that despite the assumption that students are digital natives with strong understandings of the complexities of social media, many "do not always feel comfortable and at ease with Facebook, and they do not appear to be willing to use informal tools such as Facebook as a unique teaching tool for learning" (p. 496).

Many studies also claim that using social media in the classroom can actually help to improve traditional literacies as well (e.g., Dalton & Palincsar, 2007; Hughes & Morrison, 2014; Magrino & Sorrell, 2014). In their five years of incorporating social media into their university writing courses, Magrino and Sorrell (2014) found that weaker students consistently improve because of the ability to express their ideas in different modes, and stronger students flourish because of the additional opportunities to personalize and polish their projects. Additionally, in their study of students using Twitter, Greenhow and Gleason (2012) claimed that students' tweeting practices might improve their standard communication by:

- (1) improving students' motivation and engagement with course content; (2) increasing student-student or student-instructor interactions, which creates more opportunities for feedback and mentoring; and (3) offering lower barriers to publishing and a more

“relaxed” writing style, which can encourage self-expression, creativity, playfulness, and risk-taking. (p.437).

These claims, prudently shrouded in hypothetical verbs, do not go beyond the scope of their article or make assertions that are too lofty. Instead, Greenhow and Gleason made reasonable, small implications for how using social media in the classroom might help to engender student engagement that could lead to improved literacy practices.

Additionally, in their work with English Language Learners, Hughes and Morrison (2014) advocated the use of social networking sites to promote both multiliteracy and traditional literacy practices. For students who struggled with expressing their ideas with written text, the multimodal functions of social media provided students with a range of ways to present their ideas. Using modes other than printed text can allow the students to supplement communication with other modes like pictures, drawings, and videos (Kress, 2003; Nelson, 2006) and help struggling students with literacy learning (Hughes & Morrison, 2014; van Lier, 2004). According to Kress and van Leeuwen (2001), these multimodal functions give access to struggling students and allow them to feel like a part of the literacy and learning community. In their final interviews with Hughes and Morrison (2014), students reported that they believed their English reading and writing skills as well as their confidence had improved. This, however, was self-reported data that was also from the two students in whom Hughes and Morrison saw the most growth, and therefore, needs to be considered judiciously.

Magrino and Sorrell (2014) also claimed that the use of social media in their writing courses can help to improve students' traditional literacy skills; however, this is not explicitly supported with either the student examples given or the discussion. A large amount of further information and explanation would be needed to assert this claim, including the

conceptualization of the notion of learning. For examples of thoroughly operationalized conceptions of learning, see Greenhow, Robelia, and Hughes (2009) for their theoretical piece about learning with Web 2.0 or Hew and Cheung (2013) for their literature review on quantitative studies on learning through Web 2.0 technologies. Scholars have also discussed this in terms of learning *goals* like Beauchamp and Kennewell (2010) did in their manuscript detailing interactivity with ICTs and its impact on learning.

Classroom Incorporation

Because social-media use has been taken up and studied in such varying ways, there are many ideas for how social media should be incorporated into classrooms. In the following section, I discuss some scholars' recommendations for how to include social media in the classroom based on their findings. I consider the teacher's role and the importance of modeling and framing the technology as well as students' roles and how they affect the incorporation of social media in the classroom.

In his longitudinal study looking at 35 projects using mobile learning and Web 2.0 technologies, Cochrane (2014) outlined six critical factors for success. These are 1) pedagogically integrating the desired technology into the course and assessments, 2) modeling the pedagogical use of the tools, 3) ensuring that there is a supportive learning community, 4) selecting appropriate mobile devices and Web 2.0 technologies, 5) providing both technological and pedagogical support to students, and 6) allowing for interaction that helps to re-conceptualize the roles of teachers and students to co-designers and co-constructors of knowledge (p.73). Many of these ideas are also echoed individually by other scholars (e.g., Arzipe & Styles, 2015; Beauchamp & Kennewell, 2010; Edwards-Groves, 2011; Leu et al., 2013; New London Group, 2000).

Like Cochrane (2014), many scholars focus on how to best prepare teachers (e.g., Edwards-Groves, 2011; Leu et al., 2013). For example, in her study, Edwards-Groves observed two school scenarios: one where the whole school took up the mission of better incorporating technology into student's writing and one where teachers were working more independently (with the facilitators) to incorporate technology into students' writing. She found that of the two cases that she observed, the teachers who were supported by the whole school were better able to discuss the challenges and successes that they faced. According to Leu et al., (2013), professional development for teachers is an important priority for successful integration of social media in the classroom as teachers are a critical component of how social media affects student learning.

Some scholars have found that the ways in which the technology was actually incorporated into the classroom was more important than just the presence of technology (e.g., Hew & Cheung, 2013; Matthewman et al., 2004) and many emphasize the importance of modeling (Cochrane, 2014; Jimoyiannis & Angelaina, 2012; Magrino & Sorrell, 2014). Beauchamp and Kennewell (2010) also found that when teachers first tried to incorporate social media into their classrooms, the technology was generally the focus, and therefore, the interaction around it was forced and superficial. However, when the teachers fully embedded the technology into their pedagogical practice and knowledge, the technologies were able to more authentically contribute to classroom learning (Collin & Street, 2013; Street, 2013). They found that even if the teacher was able to do this, he/she still needed to be an active member, ensuring communication and collaboration among the students, suggesting that the success of the integration and learning experiences rests heavily on the teacher (Beauchamp & Kennewell, 2010). If a teacher is ill-prepared to integrate digital technology and change the way he/she views his/her role as the expert in the classroom, then the new social media will likely not be a success

(Beauchamp & Kennewell, 2010; Cochrane, 2014; Edwards-Groves, 2011; Lankshear & Bigum, 1999).

While the focus is generally on the teacher for using social media in the classroom, the student interaction is also very important. For example, another suggestion for incorporation is from a teacher in Edwards-Groves (2011) study who suggested that students not only interact online but also discuss and consult with each other in class about their learning and problem solving to ensure that they are using cooperative learning strategies. In another example from Edwards-Groves' study, a student makes a similar suggestion, noting that students need to work collaboratively, discussing their progress to enhance the learning experience. Therefore, in order to facilitate effective use of social media in the classroom, students need to also have face-to-face discussions around their learning in class as well (Beauchamp & Kennewell, 2010; Edwards-Groves, 2011).

Students also need to see the value in their participation in social media. In many studies, students are required to use social media for in-school purposes that they typically use voluntarily out of school, which they may find useless or inauthentic (Crook, 2012; Guzzetti & Gamboa, 2004). If they do not value using social media to design multimodal texts, represent ideas in non-traditional ways, or interact with other students via social media (Collin & Street, 2013), then they will not see a reason to participate in any way that benefits them or the other students in the class. Instead, teachers may need to address that the use of social media in the classroom is for a new use, one that is more closely aligned with the ideologies embedded in the project (Collin & Street, 2013; Crook, 2012; Leu et al., 2013).

Limitations

Even with the numerous recommendations for how to incorporate social media into the classroom, many teachers still encounter limitations. For example, the teachers in Matthewman et al.'s (2004) study found:

technological hitches, lack of technical support, difficulties with the spatial arrangement of the computer suite and the tension between the need for coverage of curriculum content against the time taken to set up technology, as well as the time taken by pupils in their exploratory and often time-consuming uses of technology (p. 158).

Specifically for English classrooms, Matthewman et al. (2004) found that there were tensions between modeling expectations and allowing for creative innovation, between English classroom vocabulary use and metalanguage for multimodality use, and between the boundaries of the subject of English and other subjects. Twelve years later, teachers still face many of these limitations.

Because of the multimodal nature of social media where image is in the forefront and text is generally secondary, many worry that students' traditional reading and writing skills may decline (Bezemer & Kress, 2014; Mills, 2009). As some students are using texting conventions (abbreviations, fragmented sentences) in traditional writing, some view this as the decline of writing (Bezemer & Kress, 2014). Bezemer and Kress go so far as to propose that some people think that this "loss of literacy" with new ways of making and reading texts is a loss "for all of culture and, by a further effect, is bound to have deleterious effects on economic performance, as witnessed in OECD sponsored studies such as PISA, TIMMS and PIRLS," (p. 3). However, they argue that this claim does not take into account the "practices, aesthetics, ethics and epistemologies of contemporary forms of text production," (Bezemer & Kress, 2014, p. 3).

Kaufer, Gunawardena, Tan, and Cheek, (2011) argue that in order to take these into account, teachers must ensure that social media in the classroom is there to improve upon and interrogate texts, not there as a distraction that does not promote literacy skills. Additionally, Kalantzis and Cope (2008) argue that literacy is not about learning the proper way to use words. Instead, it is about the different ways in which people can use those words in context (e.g., writing an e-mail to a friends versus an employer or writing a website for a food blog versus writing a website for a club).

Furthermore, some scholars also discuss the opposition to social media in the classroom because there is a fear that nontraditional texts will replace traditional ones (Luke, 2000; Mills, 2009). Mills (2009), however, argues that “information texts, emails, websites, databases, visual literacies and oral discourses should not be overlooked as ‘inferior literacies’,” (p.106). Luke (2000) echoes this sentiment, noting that writing electronically is still literacy and does not diminish traditional literacy practices, much in the same way that writing on a typewriter does not diminish literacy practices associated with handwriting a text. Mills (2009) also argues that the inclusion of new technologies and digital texts does not mean that there is no longer a place for classic literature in the classroom. In fact, because of Web 2.0 technologies, some scholars show that the lines between traditional and nontraditional texts are increasingly more blurred as classic texts take on new, interactive lives online (e.g., Mackey, 1998; Unsworth, 2006).

Another limitation of using social media in the classroom is that its use is often dependent on a teacher's knowledge (Edwards-Groves, 2011; Lankshear & Bigum, 1999). Many teacher preparation programs do not teach teachers how to incorporate social media and technology into the classroom, which results in ill-fated attempts by teachers in practice, despite their personal use of computers outside of the classroom (McVee et al., 2008). Teachers are

challenged with how to increase students' understanding of the tools as well as their own and how to incorporate social media into the curriculum in an effective way (Zammit, 2015). What the teacher is most comfortable with is generally given the most attention in the classroom (Edwards-Groves, 2011; Edwards-Groves and Langley 2009; Langley 2009). This means that even though a project may be started with intentions of bringing students' out-of-school literacies into the classroom, if the teacher is not familiar with the tool or how to use it, he/she may actually be doing the students a disservice. On the other hand, if a teacher is something of an "insider" to the social media being used (i.e., they use it themselves and understand the practices within it), then he/she may have an advantage of better understanding both the platform and the literacy practices within it (Lankshear & Knobel, 2007; Stornaiuolo, Higgs, & Hull, 2013).

Students' knowledge and understanding of social media must also be considered as a potential limitation for integration (Lewis et al., 2010; Magrino & Sorrell, 2014; Mao, 2014). Even if students are comfortable with social media, they may not know or understand how to use it in an academic setting, and therefore, the assumptions about them as a "digital native" may be false in an academic setting (Leu et al., 2013; Magrino & Sorrell, 2014; Manca & Ranieri, 2013). Manca and Ranieri (2013) found that most students still view schooling in traditional and formal ways where they hold precise distinctions for times and spaces between socializing and learning.

Because of social media's interactivity, fluidity, and structures that do not mirror those of the classroom (Lewis et al., 2010), students' own technology use and perspectives "influence the design, development, and implementation of effective instructional strategies," (Mao, 2014, p. 213). Even though students may have skills in downloading, video gaming, modding (modifying) games for sharing, creating mash-ups, posting on social media, etc., they may not

know how to use these skills in the classroom or use other skills like researching online and critically evaluating sources (Leu et al., 2013). According to Staarman (2009), even though the platform may be familiar, the genre of communication for academic purposes may not be, and the conventionalized communications on the platform may not match the academic expectations of its use in the classroom.

Another issue is the rapidity with which social media changes and the difficulty of studying something that changes so quickly. In his book, Gee (2015) explores the use of video games and the conversations that the players have with them. He argues that video games need to be studied for the language that is occurring between the player and the video game (and potentially the other players). Gee notes that this is difficult because video games go out of date quickly and the mechanics and language of the game change all the time. They are also hard to describe since they belong to a family concept, meaning they share similarities but all can look different. (Gee, 2015, p. 81). While he is speaking specifically about video games, these are all broader issues found in studying social media.

Finally, it is important to note that social media alone is not the biggest factor in student success in the classroom. There is worthy resistance to false notion that social media is a classroom panacea (Brabazon, 2011; Kellner, 2000; Leu et al., 2013). Focusing too heavily on the technology and not enough on the practices or literacies that teachers hope students will use, practice, and learn, is a pitfall that many fall into (Beauchamp & Kennewell, 2010; Hew & Cheung, 2013; McVee et al., 2008). In their study, Matthewman et al. (2004) found that teachers assumed that the use of digital technology in their classes could be used as scaffolding for the regular written tasks into which it was being incorporated. However, this was not the case, and the time spent on a project was actually increased from five weeks to seven weeks to allow for

further scaffolding and preparation. Matthewman and colleagues found that teachers in their study were seeing digital technology as a pedagogic strategy and not as a pedagogic tool, which significantly influenced take-up.

Conclusion

While there is some consensus of what social media can offer teachers and students in the classroom and what the best practices are for archiving claimed results, there are still many unanswered questions. One reason for this might be the constantly changing nature of social media (Gee, 2015). Another reason might be that because social media are so broad, flexible, and fluid, there are a multitude of ways that teachers and students can use it in the classroom. However, there is agreement that social media are pervasive in the daily lives of most U.S. citizens and its study and potential use for the classroom is important.

Therefore, many scholars argue that there is still not enough research on social media in the classroom (e.g., Hew & Cheung, 2013; Moje, 2009; Stornaiuolo, Higgs, & Hull, 2013). Although studies of social media use in the classroom potentially show the benefits of its incorporation, more research needs to be done on students' literacy and learning practices while using social media in schools (Stornaiuolo, Higgs, & Hull, 2013), especially those that front the use of photos and videos over traditional print text. Moje (2009) calls for new and continued research for social media classroom application, focusing on specific teachers who effectively incorporate social media tools to promote multiliteracies. Furthermore, very few studies focus specifically on the communication and literacy practices between students both in the classroom and through the social media and the larger process surrounding the use of social media in the classroom (Greenhow, Gibbins, & Menzer, 2015; Moje, 2009). Researchers should also focus on what learners are doing with social media as well as issues of access and equality with social

media (Greenhow et al., 2015). Research directions might also include a focus on the literacy practices happening around the social media in the classroom and how this adds to the understanding of the literacy practices mediate by the social media.

References

- Ajayi, L. (2008) Meaning-making, multimodal representation, and transformative pedagogy: An exploration of meaning construction instructional practices in an ESL high school classroom. *Journal of Language, Identity, and Education* 7(3-4), 206–229.
<http://dx.doi.org/10.1080/15348450802237822>.
- Alvermann, D. E. (2001). Reading adolescents' reading identities: Looking back to see ahead. *Journal of Adolescent and Adult Literacy*, 44(8), 676-690.
- Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *The International Review of Research in Open and Distance Learning*, 12(3), 80-97.
- Archer, A. (2006). A Multimodal Approach to Academic “Literacies”: Problematising the Visual/Verbal Divide. *Language and Education*, 20(6), 449–462.
<http://doi.org/10.2167/le677.0>
- Arizpe, E., & Styles, M. (2015). A critical review of research into children's responses to multimodal texts. In Flood, J., Heath, S. B., & Lapp, D. (Eds), *Handbook of Research on Teaching Literacy Through the Communicative and Visual Arts, Volume II: A Project of the International Reading Association* (pp.363-373). Routledge.
- Arnold, N., & Paulus, T. (2010). Using a social networking site for experiential learning: Appropriating, lurking, modeling and community building. *The Internet and Higher Education*, 13(4), 188–196. <http://doi.org/10.1016/j.iheduc.2010.04.002>
- Barton, D., Hamilton, M., & Ivanič, R. (2000). *Situated literacies: Reading and writing in context*. Psychology Press.

- Beauchamp, G., & Kennewell, S. (2010). Interactivity in the classroom and its impact on learning. *Computers & Education*, 54(3), 759–766.
<http://doi.org/10.1016/j.compedu.2009.09.033>
- Bezemer, J., & Kress, G. (2014, np). Young people, Facebook and pedagogy: Recognizing contemporary forms of multimodal text making. Manuscript prepared for M. Kontopodis, C. Varvantakis, M. Dafermos & C. Wulf. Berlin: Waxmann (Eds.), *Youth, Tube, Media: Qualitative insights and international perspectives* (Submitted May 2014).
- Bialostok, S. M. (2014). Metaphors that teachers live by: a cultural model of literacy in the era of new literacies. *Language and Education*, 28(6), 501–520.
<http://doi.org/10.1080/09500782.2014.905591>
- Black, R.W. (2005, April). (Tech)tual interaction: The dialogic nature of English language learners' activities in a fan fiction-based website. Paper presented at the *American Educational Research Association*, Montreal, Quebec, Canada.
- Blaschke, L. M. (2014). Using social media to engage and develop the online learner in self-determined learning. *Research in Learning Technology*, 22(0), 1-23.
<http://doi.org/10.3402/rlt.v22.21635>
- boyd, d. (2011). Social network sites as networked publics: Affordances, dynamics, and implications. In Z. Papacharissi (Ed.), *Networked self: Identity, community, and culture on social network sites* (pp. 38–57). New York, NY: Routledge.
- boyd, d. m., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230.
<http://doi.org/10.1111/j.1083-6101.2007.00393.x>

- Brabazon, T. (2011). "We've spent too much money to go back now': credit-crunched literacy and a future for learning. *E-Learning and Digital Media*, 8(4), 296.
<http://doi.org/10.2304/elea.2011.8.4.296>
- Buck, A. (2012). Examining digital literacy practices on social network sites. *Research in the Teaching of English*, 47(1), 9–38.
- Canning, N. (2010). Playing with heutagogy: exploring strategies to empower mature learners in higher education. *Journal of Further and Higher Education*, 34(1), 59-71.
- Chandler-Olcott, K., & Mahar, D. (2003). "Tech-savviness" meets multiliteracies: Exploring adolescent girls' technology-mediated literacy practices. *Reading Research Quarterly*, 38(3), 356-385.
- Cochrane, T. D. (2014). Critical success factors for transforming pedagogy with mobile Web 2.0: Transforming pedagogy with mobile web 2.0. *British Journal of Educational Technology*, 45(1), 65–82. <http://doi.org/10.1111/j.1467-8535.2012.01384.x>
- Coiro, J., & Fogleman, J. (2011). Using Websites Wisely. *Educational Leadership*, 68(5), 34-38.
- Coleman, V. (2013). Social media as a primary source: a coming of age. *EDUCAUSE Review*, [online] Available at: <http://www.educause.edu/ero/article/social-media-primary-source-coming-age>
- Collin, R., & Street, B. V. (2014). Ideology and Interaction: Debating Determinisms in Literacy Studies. *Reading Research Quarterly*, n/a–n/a. <http://doi.org/10.1002/rrq.75>
- Conole, G., & Dyke, M. (2004). What are the affordances of information and communication technologies? *ALT-J*, 12(2), 113–124. <http://doi.org/10.1080/0968776042000216183>

- Cope, B., & Kalantzis, M. (2000). *Multiliteracies: Literacy learning and the design of social futures*. Psychology Press.
- Cope, B., & Kalantzis, M. (2009). "Multiliteracies": New Literacies, New Learning. *Pedagogies: An International Journal*, 4(3), 164–195.
<http://doi.org/10.1080/15544800903076044>
- Crook, C. (2012). The "digital native" in context: tensions associated with importing Web 2.0 practices into the school setting. *Oxford Review of Education*, 38(1), 63–80.
<http://doi.org/10.1080/03054985.2011.577946>
- Curwood, J. S., & Fink, L. (2013). The Hunger Games: Literature, literacy, and online affinity spaces. *Language Arts*, 90(6), 417-427.
- Dabbagh, N., & Kitsantas, A. (2012). Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *The Internet and Higher Education*, 15(1), 3–8. <http://doi.org/10.1016/j.iheduc.2011.06.002>
- Dalton, B., & Palincsar, A. (2007). Reading to Learn: Investigating general and domain specific supports in a technology-rich environment with diverse readers learning from informational text. *Washington, DC: Institute for Education Sciences*.
- Davis, C. H. F., III, Deil-Amen, R., Rios-Aguilar, C., & González Canché, M. S. (2012). *Social media and higher education: A literature review and research directions* (Report). Retrieved from
<http://works.bepress.com/cgi/viewcontent.cgi?article=1003&context=hfdavis>
- DeAndrea, D. C., Ellison, N. B., LaRose, R., Steinfield, C., & Fiore, A. (2012). Serious social media: On the use of social media for improving students' adjustment to college. *The Internet and Higher Education*, 15(1), 15-23.

DuBose, C. (2011). The social media revolution. *Radiologic technology*, 83(2), 112-119.

Edwards-Groves, C. J. (2011). The multimodal writing process: changing practices in contemporary classrooms. *Language and Education*, 25(1), 49–64.

<http://doi.org/10.1080/09500782.2010.523468>

Edwards-Groves, C., & M. Langley. (2009). i-Kindy: Responding to home *technoliteracies* in the kindergarten classroom. *Bridging Divides* Conference Papers. Paper presented at the AATE/ALEA National 2009. Hobart, Australia.

Ellison, N. B., & Wu, Y. (2008). Blogging in the classroom: A preliminary exploration of student attitudes and impact on comprehension. *Journal of Educational Multimedia and Hypermedia*, 17(1), 99–122.

Ellison, N. B., Steinfield, C., & Lampe, C. (2011). Connection strategies: Social capital implications of Facebook-enabled communication practices. *New Media & Society*, 13(6), 873–892.

English, R., & Duncan-Howell, J. (2008). Facebook© goes to college: Using social networking tools to support students undertaking teaching practicum. *MERLOT Journal of Online Learning and Teaching*, 4, 596–601.

Forkosh-Baruch, A., & HersHKovitz, A. (2012). A case study of Israeli higher-education institutes sharing scholarly information with the community via social networks. *The Internet and Higher Education*, 15(1), 58–68.

<http://doi.org/10.1016/j.iheduc.2011.08.003>

Gee, J. P. (2015). *Unified Discourse Analysis: Language, Reality, Virtual Worlds and Video Games*. Routledge.

- Goodband, J. H., Solomon, Y., Samuels, P. C., Lawson, D., & Bhakta, R. (2012). Limits and potentials of social networking in academia: Case study of the evolution of a mathematics Facebook community. *Learning, Media and Technology*, 37 (3), 236–252.
- Greenhow, C., & Gleason, B. (2012). Twitteracy: Tweeting as a new literacy practice. In *The Educational Forum*, 76(4), 464-478. <http://dio.org/10.1080/00131725.2012.709032>
- Greenhow, C., & Robelia, B. (2009). Old communication, new literacies: Social network sites as social learning resources. *Journal of Computer-Mediated Communication*, 14(4), 1130–1161. <http://dx.doi.org/10.1111/j.1083-6101.2009.01484.x>.
- Greenhow, C., Gibbins, T., & Menzer, M. M. (2015). Re-thinking scientific literacy out-of-school: Arguing science issues in a niche Facebook application. *Computers in Human Behavior*, 53, 593-604.
- Greenhow, C., Robelia, B., & Hughes, J. E. (2009). Learning, Teaching, and Scholarship in a Digital Age: Web 2.0 and Classroom Research: What Path Should We Take Now? *Educational Researcher*, 38(4), 246–259. <http://doi.org/10.3102/0013189X09336671>
- Guzzetti, B. J., & Gamboa, M. (2004). Zines for social justice: Adolescent girls writing on their own. *Reading Research Quarterly*, 39(4), 408-436.
- Halverson, E. R. (2009). Shifting learning goals: from competent tool use to participatory media spaces in the emergent design process. *Cultural Studies of Science Education*, 4(1), 67–76. <http://doi.org/10.1007/s11422-008-9136-7>
- Hew, K. F., & Cheung, W. S. (2013). Use of Web 2.0 technologies in K-12 and higher education: The search for evidence-based practice. *Educational Research Review*, 9, 47–64. <http://doi.org/10.1016/j.edurev.2012.08.001>

- Hull, G. A., & Nelson, M. E. (2005). Locating the Semiotic Power of Multimodality. *Written Communication*, 22(2), 224–261. <http://doi.org/10.1177/0741088304274170>
- Hull, G. A., Stornaiuolo, A., & Sterponi, L. (2013). Imagined readers and hospitable texts: Global youth connect online. In D. Alvermann, N. Unrau, & R. Ruddell (Eds.), *Theoretical Models and Processes of Reading* (6th ed.), (pp. 1208–1240). Newark, DE: International Reading Association.
- Jimoyiannis, A. & Angelaina, S. (2012). Towards an analysis framework for investigating students' engagement and learning in educational blogs. *Journal of Computer Assisted Learning*, 28(3), 222–234.
- Jonassen, D.H., Howland, J., Moore, J., & Marra, R.M. (2003). *Learning to solve problems with technology: A constructivist perspective* (2nd ed.). Columbus, OH: Merrill/Prentice-Hall.
- Kalantzis, M., & Cope, B. (2005). *Learning by design*. Melbourne: Victorian Schools Innovation Commission and Common Ground Publishing.
- Kalantzis, M., & Cope, B. (2008). Language education and multiliteracies. In Hornberger, N. (Ed), *Encyclopedia of language and education* (pp. 195–211). Springer. Retrieved from http://link.springer.com/10.1007/978-0-387-30424-3_15
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68. <http://doi.org/10.1016/j.bushor.2009.09.003>

- Kaufer, D., Gunawardena, A., Tan, A., & Cheek, A. (2011). Bringing Social Media to the Writing Classroom: Classroom Salon. *Journal of Business and Technical Communication*, 25(3), 299–321. <http://doi.org/10.1177/1050651911400703>
- Kellner, D. (2000). New Technologies/New Literacies: Reconstructing education for the new millennium. *Teaching Education*, 11(3), 245–265. <http://doi.org/10.1080/713698975>
- Kress, G. (2003). *Literacy in the new media age*. Psychology Press.
- Langley, M. (2009). iKindy: An exploration of the integration of Information and Communication Technology (ICT) into kindergarten classrooms. Honours thesis, Charles Sturt University. Paper presented at the AATE/ALEA National 2009. Hobart, Australia.
- Lankshear, C., & Bigum, C. (1999). Literacies and new technologies in school settings. *Pedagogy, Culture & Society*, 7(3), 445–465. <http://doi.org/10.1080/14681369900200068>
- Lankshear, C., & Knobel, M. (2007). Researching New Literacies: Web 2.0 practices and insider perspectives. *E-Learning*, 4(3), 224. <http://doi.org/10.2304/elea.2007.4.3.224>
- Lankshear, C., & Knobel, M. (2014). Englishes and Digital Literacy Practices. In C. Leung, B.V. Street (Eds.) *The Routledge Companion to English Studies*, (pp. 451-463). Routledge.
- Leander, K. M., & Lovvorn, J. F. (2006). Literacy networks: Following the circulation of texts, bodies, and objects in the schooling and online gaming of one youth. *Cognition and Instruction*, 24(3), 291-340.
- Lee, C. K. M. (2007). Affordances and Text-Making Practices in Online Instant Messaging. *Written Communication*, 24(3), 223–249. <http://doi.org/10.1177/0741088307303215>

- Lenhart, A. (2015). Teen, Social Media and Technology Overview 2015. *Pew Research Center*.
- Leu, D. J., Kinzer, C. K., Coiro, J., Castek, J., & Henry, L. A. (2013). New literacies: A dual level theory of the changing nature of literacy, instruction, and assessment. In Alvermann, D. E., Unrau, N. J., & Ruddell, R. B. (Eds.), *Theoretical models and processes of reading* (pp. 1150-1181). International Reading Association.
- Lewis, S., Pea, R., & Rosen, J. (2010). Beyond participation to co-creation of meaning: mobile social media in generative learning communities. *Social Science Information*, 49(3), 351–369. <http://doi.org/10.1177/0539018410370726>
- Lui, A. K., Choy, S.-O., Cheung, Y. H. Y. & Li, S. C. (2006). A study on the perception of students towards educational weblogs. *Informatics in Education*, 5(2), 233-254.
- Mackey, M. (1998). *The case of Peter Rabbit: Changing conditions of literature for children*. New York: Garland.
- Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Face- book, social integration and informal learning at univer- sity: 'It is more for socialising and talking to friends about work than for actually doing work'. *Learning, Media and Technology*, 34, 141–155.
- Magrino, W., & Sorrell, P. (2014). Teaching the New Paradigm: Social Media Inside and Outside the Classroom. *Writing & Pedagogy*, 5(2), 357–373. <http://doi.org/10.1558/wap.v5i2.357>
- Manca, S., & Ranieri, M. (2013). Is it a tool suitable for learning? A critical review of the literature on Facebook as a technology-enhanced learning environment: Is Facebook a tool suitable for learning? *Journal of Computer Assisted Learning*, 29(6), 487–504. <http://doi.org/10.1111/jcal.12007>

- Mao, J. (2014). Social media for learning: A mixed methods study on high school students' technology affordances and perspectives. *Computers in Human Behavior*, 33, 213–223. <http://doi.org/10.1016/j.chb.2014.01.002>
- Marwick, A. E. & boyd, d. (2011). I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New media & society*, 13(1), 114-133.
- Matthewman, S., Blight, A., & Davies, C. (2004). What does multimodality mean for English? Creative tensions in teaching new texts and new literacies. *Education, Communication & Information*, 4(1), 153–176. <http://doi.org/10.1080/1463631042000210944>
- McLoughlin, C., & Lee, M. J. (2007, December). Social software and participatory learning: Pedagogical choices with technology affordances in the Web 2.0 era. In *ICT: Providing choices for learners and learning. Proceedings ascilite Singapore 2007* (pp. 664-675).
- McLoughlin, C., & Lee, M. J. (2008). Mapping the digital terrain: New media and social software as catalysts for pedagogical change. Ascilite Melbourne.
- McLoughlin, C., & Lee, M. J. (2010). Personalised and self regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software. *Australasian Journal of Educational Technology*, 26(1), 28-43.
- McNely, B. J. (2012). Shaping organizational image-power through images: Case histories of Instagram. In *Professional Communication Conference (IPCC), 2012 IEEE International* (pp. 1–8). IEEE. Retrieved from http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6408624
- McVee, M. B., Bailey, N. M., & Shanahan, L. E. (2008). Teachers and teacher educators learning from new literacies and new technologies. *Teaching Education*, 19(3), 197–210. <http://doi.org/10.1080/10476210802250216>

- Miller, S.M., & Borowicz, S. (2005). City voices, city visions: digital video as literacy/learning super tool in urban classrooms. In L. Johnson, M. Finn, & R. Lewis (Eds.), *Urban education with an attitude: Linking theory, practice and community* (pp. 87–105). Albany, NY: SUNY Press.
- Mills, K. A. (2009). Multiliteracies: interrogating competing discourses. *Language and Education*, 23(2), 103–116. <http://doi.org/10.1080/09500780802152762>
- Minocha, S. (2009). Role of social software tools in education: a literature review. *Education & Training*, (51)5/6, 353-369.
- Moje, E. B. (2009). Standpoints: A call for new research on new and multi-literacies. *Research in the Teaching of English*, 43(4), 348-362.
- Moran, J., Ferdig, R. E., Pearson, P. D., Wardrop, J., & Blomeyer, R. L. (2008). Technology and reading performance in the middle-school grades: A meta-analysis with recommendations for policy and practice. *Journal of Literacy Research*, 40(1), 6-58.
- Moran, M., Seaman, J., & Tinti-Kane, H. (2011). Teaching, Learning, and Sharing: How Today's Higher Education Faculty Use Social Media. *Babson Survey Research Group*.
- Nelson, M. (2006). Mode, meaning and synaesthesia in multimedia L2 writing. *Language Learning and Technology* 10: 56--76. Retrieved on 10 May 2013 from <http://llt.msu.edu/vol10num2/nelson/default.html>.
- New London Group. (1996, 2000). A pedagogy of multiliteracies: Designing social futures. In B. Cope and M. Kalantzis (Eds.) *Multiliteracies: Literacy learning and the design of social futures*. New York, NY: Routledge.
- Nichols, S. (2007). Exploring creativity support systems for the ne‘x’t generation. In *IADIS, In-ternational Conference Interfaces and Human Computer Interaction*, (pp. 67–74).

- Lisbon, Portugal: International Association for Development of the Information Society (IADIS). http://www.iadis.net/dl/final_uploads/200710L009.pdf.
- O'Byrne, B. (2009). Knowing More than Words Can Say: Using multimodal assessment tools to excavate and construct knowledge about wolves. *International Journal of Science Education*, 31(4), 523-539.
- O'reilly, T. (2007). What is Web 2.0: Design patterns and business models for the next generation of software. *Communications & strategies*, 65(1), 17.
- O'Byrne, B., & Murrell, S. (2014). Evaluating multimodal literacies in student blogs: Evaluating multimodal literacies in student blogs. *British Journal of Educational Technology*, 45(5), 926–940. <http://doi.org/10.1111/bjet.12093>
- Okoro, E. A., Hausman, A., & Washington, M. C. (2012). Social media and networking technologies: An analysis of collaborative work and team communication. *Contemporary Issues in Education Research (CIER)*, 5(4), 295–300.
- Palincsar, A. S., & Dalton, B. (2005). Speaking Literacy and Learning to Technology, Speaking Technology to Literacy and Learning. In *YEARBOOK-NATIONAL READING CONFERENCE*, (54), 83.
- Perrin, A. (2015). Social Networking Usage: 2005-2015. *Pew Research Center*.
- Perrin, A., Duggan, M. (2015). Americans' Internet Access: 2000-2015. *Pew Research Center*.
- Rambe, P. (2012a). Activity theory and technology mediated interaction: Cognitive scaffolding using question-based consultation on Facebook. *Australasian Journal of Educational Technology*, 28(8), 1333–1361.
- Rambe, P. (2012b) Critical discourse analysis of collaborative engagement in Facebook postings. *Australasian Journal of Educational Technology*, 28(2), 295–314.

- Rambe, P. (2013). Converged social media: Identity management and engagement on Facebook Mobile and blogs. *Australasian Journal of Educational Technology*, 29(3), 315-336.
- Robbins, S. P., & Singer, J. B. (2014). From the Editor—The Medium Is the Message: Integrating Social Media and Social Work Education. *Journal of Social Work Education*, 50(3), 387–390.
- Roblyer, M. D., McDaniel, M., Webb, M., Herman, J., & Witty, J. V. (2010). Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *The Internet and Higher Education*, 13(3), 134–140. <http://doi.org/10.1016/j.iheduc.2010.03.002>
- Sam, C. (2012). Activity Theory and Qualitative Research in Digital Domains. *Theory Into Practice*, 51(2), 83–90. <http://doi.org/10.1080/00405841.2012.662856>
- Santo, R. (2011). Hacker literacies: Synthesizing critical and participatory media. *International Journal of Learning and Media*, 3(3), 1–5.
- Serafini, F. (2012). Reading Multimodal Texts in the 21st Century. *Research in the Schools*, 19(1). Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authType=crawler&jrnl=10855300&AN=85687817&h=%2BGoYhOK5uuPEZSdKPiamCsWzOqFZ0B%2F8OrZq1z7zUDrHyTLHpjNKiExYPyd72FQhI2lWgzAus0VoDLlenxmQkg%3D%3D&crl=c>
- Shirky, C. (2008). *Here comes everybody*. New York: Penguin Paperbacks.
- Siemens, G., & Weller, M. (2011). Higher education and the promises and perils of social network. *Revista de Universidad y Sociedad del Conocimiento (RUSC)*, 8(1), 164-170.

- Sim, J. W. S., & Hew, K. F. (2010). The use of weblogs in higher education: A review of empirical research. *Educational Research Review*, 5(2), 151–163.
- Smith, A., Schlozman, K.A., Verba, S., & Brady, H. (2009). *The Internet and civic engagement*. Pew Internet & American Life Project.
<http://www.pewinternet.org/2009/09/01/the-internet-and-civic-engagement/>
- Staarman, J. K. (2009). The joint negotiation of ground rules: establishing a shared collaborative practice with new educational technology. *Language and Education*, 23(1), 79–95. <http://doi.org/10.1080/09500780802152796>
- Stornaiuolo, A., Higgs, J., & Hull, G.A. (2013). Social media as authorship: Methods for studying literacies and communities online. In P. Albers, T. Holbrook, A.S. Flint (Eds.), *New methods of literacy research* (pp. 224-237). New York: Routledge.
- Street, B. (2003). What's "new" in New Literacy Studies? Critical approaches to literacy in theory and practice. *Current Issues in Comparative Education*, 5(2), 77–91.
- Street, B. (2013). Literacy in Theory and Practice: Challenges and Debates Over 50 Years. *Theory Into Practice*, 52(sup1), 52–62. <http://doi.org/10.1080/00405841.2013.795442>
- Thesen, L. (2001) Modes, literacies and power: A university case study. *Language and Education*, 14, (2 & 3).
- Unsworth, L. (2001). *Teaching multiliteracies across the curriculum*. Buckingham-Philadelphia: Open University Press. Retrieved September, 26, 2005.
- Unsworth, L. (2006). *E-Literature for children: Enhancing digital literacy learning*. London: Routledge.

- Unsworth, L., & Chan, E. (2009). Bridging multimodal literacies and national assessment programs in literacy. *The Australian Journal of Language and Literacy*, 32(3), 245-257.
- van Lier, L. (2004) *The Ecology and Semiotics of Language Learning: A Sociocultural Perspective*. Norwell, Massachusetts: Kluwer Academic.
- Vie, S. (2015). What's Going On?: Challenges and Opportunities for Social Media Use in the Writing Classroom. *The Journal of Faculty Development*, 29(2), 33-44.
- Vygotsky, L. S. (1999). Tool and sign in the development of the child. In Rieber, R. W. (Ed.), *The collected works of LS Vygotsky (Vol. 6)* (pp. 3-68). Springer Science & Business Media.
- Wandel, T. (2007, July). About Facebook: *Educational institution responses to online social networking*. WCA Conference, Brisbane.
- Wodzicki, K., Schwämmlein, E., & Moskaliuk, J. (2012). "Actually, I Wanted to Learn": Study-related knowledge exchange on social networking sites. *The Internet and Higher Education*, 15(1), 9-14. <http://doi.org/10.1016/j.iheduc.2011.05.008>
- Zammit, K. P. (2011). Connecting multiliteracies and engagement of students from low socio-economic backgrounds: using Bernstein's pedagogic discourse as a bridge. *Language and Education*, 25(3), 203-220. <http://doi.org/10.1080/09500782.2011.560945>